Amendments To The Claims:

Please amend the claims as shown.

1 – 19 (canceled)

20.   (new) A method for controlling the castability of liquid steel, comprising:

gathering historical data from a plurality of prior liquid steel cast melts;

calculating a plurality of interactions that influence the castability of a liquid steel melt for a plurality of alloy elements based upon the historical data;

creating a plurality of operating parameters based upon the calculations;

selecting alloying elements to be added to the melt in order to obtain desired material properties of the steel based upon the operating parameters; and

casting the steel that includes the selected alloy elements within the melt.

21.   (new) The method for controlling the castability of liquid steel as claimed in claim 20, wherein the interactions are chemical interactions or physical interactions.

22.   (new) The method for controlling the castability of liquid steel as claimed in claim 21, wherein the operating parameters are embodied as diagrams.

23.   (new) The method for controlling the castability of liquid steel as claimed in claim 22, wherein the cast melt is determined to be either castable or un-castable based on the gathered data.

24.   (new) The method for controlling the castability of liquid steel as claimed in claim 23, wherein the castable determination is a permitted range defined by an overlap of areas within the diagrams.

25.   (new) The method for controlling the castability of liquid steel as claimed in claim 24, wherein an actual value of the alloying element and the permitted range is shown on one diagram.

26. (new) The method for predicting and controlling the castability of liquid steel as claimed in claim 24, wherein an updated value of an alloying element is provided after a treatment step is performed on the melt.

27. (new) The method for predicting and controlling the castability of liquid steel as claimed in claim 26, wherein after multiple treatment steps, the actual values of an alloying element are shown as points on a graph, the points connected together by straight line segments.

28. (new) The method for controlling the castability of liquid steel as claimed in claim 21, wherein the interactions are implemented as mathematical models in a computer system.

29. (new) The method for controlling the castability of liquid steel as claimed in claim 28, wherein the mathematical models use fuzzy logic methods.

30. (new) The method for controlling the castability of liquid steel as claimed in claim 28, wherein the mathematical models use neural network methods.

31. (new) The method for controlling the castability of liquid steel as claimed in claim 28, wherein the alloy calculation is executed as an iterative technique.

32. (new) The method for controlling the castability of liquid steel as claimed in claim 28, wherein the alloying elements used for the alloy calculation are pre-selected.

33. (new) The method for controlling the castability of liquid steel as claimed in claim 21, wherein the alloy calculation considers interactions between C, Si, Mn, S, Al, N, Zn and O_2.

34. (new) The method for controlling the castability of liquid steel as claimed in claim 33, wherein the alloy calculation considers interactions between N/O_2, Zn/O_2, S/Zn, C/Zn, Mn/S, Mn/N, Si/C, Al/C, Si/O_2, S/O_2, Si/O_2, Al/O_2, S/C, and N/C.

35. (new) The method for controlling the castability of liquid steel as claimed in claim 21, wherein the method is used in a thin-strip continuous casting machine according to the twin-roller casting process.

36. (new) A method for predicting the castability of liquid steel, comprising:

gathering historical data from a plurality of prior liquid steel cast melts;

calculating a plurality of interactions that influence the castability of a liquid steel melt for a plurality of alloy additives based upon the historical data;

creating a plurality of operating parameters based upon the calculations;

selecting alloying additives to be added to the melt in order to obtain desired material properties of the steel based upon the operating parameters; and

casting the steel that includes the selected alloy additives within the melt.

37. (new) The method for predicting the castability of liquid steel as claimed in claim 36, wherein the interactions are chemical interactions or physical interactions.

38. (new) The method for predicting the castability of liquid steel as claimed in claim 37, wherein the operating parameters are embodied as diagrams.

Amendments To The Abstract:

In the English translation document, please add the section heading at page 19 line 1, as follows:

--ABSTRACT

The invention relates to a method for predicting or controlling the castability of liquid steel, comprising gathering historical data from a plurality of prior liquid steel cast melts; calculating a plurality of interactions that influence the castability of a liquid steel melt for a plurality of alloy elements or additives based upon the historical data; creating a plurality of operating parameters based upon the calculations; selecting alloying elements to be added to the melt in order to obtain desired material properties of the steel based upon the operating parameters; and casting the steel that includes the selected alloy elements within the melt.--